REMARKS

Claims 1-18 and 23-29 are pending. In the Office Action, the Examiner rejected claims 1-18 and 23-29 as being unpatentable under 35 U.S.C. §102(e) and §103(a). In response, Applicants submit the following remarks.

Rejection Under 35 U.S.C. §102(e)

In paragraph 6, the Examiner rejected claims 1-18 and 23-29 as being anticipated by U.S. Patent No. 6,204,856 to Wood, et al. (hereinafter *Wood*). *Wood* discloses an image data processing apparatus and method that parameterizes each triangle with a respective two-dimensional coordinate system (see Abstract). Applicants respectfully traverse.

In order to properly establish a rejection under 35 U.S.C. §102(e), a reference must teach every element of the claimed invention either explicitly or impliedly. *See* MPEP §706.02. A reference may be overcome by persuasively arguing that the claimed invention is patentably distinguishable over the cited prior art. *See* MPEP §706.02(b).

Claim 1 of the present invention recites, in part, "*randomly* selecting an interior point within the graphic primitive", which is supported by the specification as filed (emphasis added). The Examiner cited *Wood* as anticipating this element of claim 1, stating, "Wood discloses determining parameter values for positions within a triangle, col. 2, lines 12-14."

However, Applicants submit that *Wood* does not teach the element of "*randomly* selecting an interior point" in the method of independent claim 1. *Wood* determines "values at positions within the triangle" (column 2, lines 12-14), using "incrementally

interpolated attributes for each triangle" (column 5, lines 53-55). *Wood* explains that triangle parameters "can be incrementally interpolated to an adjacent pixel, from there to another adjacent pixel and so on" (column 6, lines 5-7), wherein "[i]ncremental interpolation uses one pixel steps in x and y" (column 6, lines 19-20). Because the method of *Wood* sequentially interpolates adjacent pixels, *Wood* does not explicitly or impliedly disclose the "randomly selecting an interior point" element in claim 1 of the present invention. Because *Wood* does not teach all elements of the present invention, claim 1 is patentably distinct and should be allowed.

Independent claims 8-9, 13-15, 23 and 27 were rejected on similar rationale as claim 1, and should similarly be allowed. These claims each include the limitation of "randomly" selecting an interior point. Because these independent claims recite at least one limitation that is not taught or suggested by *Wood*, these claims are not anticipated thereby and should be allowed.

Dependent claims 2-7 and 28-29, which depend directly from claim 1 and inherit all the limitations thereof, are patentable over *Wood* for at least the reasons advanced above in connection with claim 1. Dependent claims 10-12 and 16-18, which depend directly or indirectly from claim 9, and dependent claims 24-26, which depend directly from claim 23, are similarly patentable over *Wood* for at least the reasons advanced above in connection with claim 1.

Rejection under 35 U.S.C. §103(a)

On page 6 of the Office Action (mis-numbered as paragraph 6), the Examiner rejected claims 1-18 and 23-29 under 35 U.S.C. §103(a) as being unpatentable over

"Computer Graphics Principles and Practice" by Foley et al. (hereinafter *Foley*), in view of U.S. Patent Number 6,108,007 to Shochet (hereinafter *Shochet*). Specifically, the Examiner stated that "Foley discloses and (sic) equation that selects a random point, Ip and draws a horizontal line...to determine the value of the randomly selected interior point Ip, see figure 16.19." The Examiner further noted that *Foley* "fails to disclose receiving a signal from an interface with channel values or parameter data", but contended that *Shochet* discloses "data comprising an image sample" and "further discloses an interpolator unit and determining an interpolated pixel value." The Examiner concluded that it "would have been obvious to one of ordinary skill in the art at the time of the invention of Foley to include means for receiving the three-dimensional graphics data through the interface of Shochet because it is necessary to include input data for graphics processing." Applicants respectfully traverse.

Claim 1 discloses "*randomly* selecting an interior point within the graphic primitive" which is supported by the specification as filed (emphasis added). Applicants submit that *Foley, Shochet*, or the combination of the two references does not disclose *randomly* selecting an interior point within the graphic primitive at which to determine an interpolated channel value. Thus, all claim limitations are not taught as required by MPEP §706.02(j). Further, the combination of receiving a signal from an interface and *randomly* selecting an interior point within the graphic primitive are neither suggested, taught, nor motivated by the cited references.

The Examiner cited *Foley* figure 16.19 as having a "randomly selected interior point Ip". On the contrary, *Foley* teaches sequentially processing scan lines, and interpolating across scan lines in sequential order, stating, "[w]ith each edge, we

store...for *each unit change* in y. A visible *span* on a scan line is filled in..." (*Foley,* at 737, emphasis added). *Foley* specifies a requirement of line-by-line traversal in sequential or sequentially-related order to fill in a *span* across a line, rather than determining channel values for any *randomly* selected *point*. As *Foley* specifically recites this sequential interpolation limitation, Applicants submit that *Foley* fails to teach, motivate, or suggest the claimed invention.

Further, the combination of receiving a signal from an interface and *randomly* selecting an interior point within the graphic primitive are neither suggested, taught, nor motivated by the cited references. The Examiner noted that *Foley* "fails to disclose receiving a signal from an interface with parameter data", but contended that *Shochet* discloses "data comprising an image sample" and "further discloses an interpolator unit and determining an interpolated pixel value." However, *Shochet* is directed to "increasing interpolation bit precision using multi-channel texture mapping...provided in limited-precision graphics hardware" (*Shochet* abstract), wherein, "[i]n most sampling operations, first and second pixels 200 and 201 are adjacent pixels..." (column 4, lines 31-33). The interpolation unit in *Shochet* merely manipulates data values of adjacent pixels in order to synthesize higher bit precision using lower precision equipment. There is no disclosure in *Shochet* of receiving a signal from an interface and *randomly* selecting an interior point of a graphic primitive as in claim 1 of the present invention.

The Examiner concluded that it "would have been obvious to one of ordinary skill in the art at the time of the invention of Foley to include means for receiving the three-dimensional graphics data through the interface of Shochet because it is necessary to include input data for graphics processing." On the contrary, even if *Foley* and *Shochet*

were combined, the combination would not equal the present invention. As discussed, *Foley* discloses only sequential interpolation, and *Shochet* teaches only sequential interpolation by manipulating data from successive pixels. Neither *Foley* nor *Shochet* nor the combination of the two references suggests the "randomly selecting an interior point" limitation of claim 1 of the present invention. The claimed invention permits random access to any point within a graphic primitive, in opposition to the methods of *Foley* and *Shochet,* which require burdensome sequential scan line-by-scan line traversal.

Applicants submit that both *Foley* and *Shochet* fail to teach, motivate, or suggest the claimed invention. Applicants submit that claim 1 is nonobvious in light of the cited references and is in condition for allowance. Claims 8, 9, 13-15, 23, and 27 were rejected upon similar rationale as claim 1, and should be allowed for the reasons shown in claim 1 above.

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Therefore, claims 2-7, and 28 and 29, dependent upon claim 1, are nonobvious. Similarly, claims 10-12 and 16, which depend upon claim 9; claim 17, which depends on claim 10; claim 18, which depends on claim 11; and claims 24-26, which depend upon claim 23, should also be allowed as nonobvious under *In re Fine*.

CONCLUSION

Applicants respectfully submit that the rejections of all claims by the Examiner in the Office Action of March 26, 2003 have been traversed. In particular, the above remarks demonstrate that *Wood* does not anticipate all elements of the claimed invention.

Neither *Foley* nor *Shochet*, either individually or in combination, teach all of the claim limitations in the claimed invention. Further, there is no suggestion or motivation to combine the references to yield the claimed invention. Thus, upon consideration of the above remarks, Applicants submit that the application is in condition for allowance, and respectfully request the issuance of a Notice of Allowability.

Respectfully submitted,

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